

REMARKS

Claims 2-7 and 9-17 are pending. By this Amendment, claims 2-7 and 9-12 are amended, and claims 1 and 8 are canceled. The undersigned gratefully acknowledges and appreciates the Examiner's indication that claims 13-17 are allowed. However, for reasons as discussed below, all the claims are allowable, thus reconsideration in view of the amendments and the following remarks is respectfully requested.

I. Information Disclosure Statement

The Office Action objects to the Information Disclosure Statement (IDS) for failing to comply with the requirements of 37 C.F.R. §1.98(a)(2). Based on the August 21 telephone conference, the Examiner stated that the IDS filed on December 6, 2001 complies with all the requirements of 37 C.F.R. §1.98(a)(2). Thus, the undersigned understands that all the documents submitted with the Information Disclosure Statement will be reviewed and acknowledged.

For the Examiner's convenience, a copy of the December 6, 2001 PTO-1449 form is enclosed for the Examiner's review and acknowledgment. Please initial the PTO-1449 form and forward a copy to the undersigned.

II. The Claims Define Patentable Subject Matter

The Office Action rejects claims 1, 3-6, 8 and 10-12 under 35 U.S.C. §103(a) over Woelki (U.S. Patent No. 5,329,090) in view of Leung (U.S. Patent No. 5,109,149) and further in view of Huang (U.S. Patent No. 6,312,876). The rejection is respectfully traversed.

Claims 1 and 8 are canceled, and claims 2 and 9 are amended to be in independent form. The Office Action indicates that claims 2 and 9 indicate allowable subject matter. Claims 3-7 and 10-12 are amended to depend on the respective independent claims 2 and 9. Furthermore, claims 13-17 contain patentable subject matter. Thus, it is submitted that all

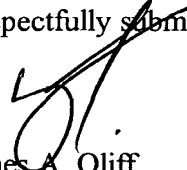
pending claims 2-7 and 9-17 are allowable. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

III. Conclusion

In view of the foregoing amendments and remarks, this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 2-7 and 9-17 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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Attached:

Copy of December 6, 2001 PTO-1449

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Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled)

2. (Currently Amended) ~~The A~~ method for imprinting wafer-identifying information ~~according to claim 1, wherein:~~ using a patterned resist layer, on wafers each having a plurality of thin-film devices formed thereon in a batch, the wafer-identifying information including a plurality of digits, each digit being expressed with a numeral or a symbol, the method comprising the steps of:

_____ selecting a wafer to be imprinted with the wafer-identifying information;
_____ forming a resist layer on the selected wafer;
_____ exposing the resist layer, using a mask, to light for forming a latent image of the wafer-identifying information; and

_____ forming the patterned resist layer by developing the exposed resist layer,

wherein:

_____ in the step of exposing the resist layer, exposure is performed for each digit of the wafer-identifying information in which the numeral or the symbol is changeable wafer by wafer, by selecting a mask on which a pattern of a numeral or the symbol to be imprinted is drawn thereon for each digit; and

in the step of exposing the resist layer, the selection of a mask on which the pattern of a numeral or the symbol to be imprinted is drawn thereon and the exposure using the selected mask are repeated as many times as the number of digits of the wafer-identifying information, so that exposure is performed for all digits of the wafer-identifying information.

3. (Currently Amended) The method for imprinting wafer-identifying information according to ~~claim 1,~~ claim 2, wherein:

in the step of exposing the resist layer, the resist layer is further exposed to light for forming a latent image of device location information for identifying a position of a thin-film device in the wafer, using a mask on which a pattern of the device location information is drawn thereon.

4. (Currently Amended) The method for imprinting wafer-identifying information according to ~~claim 1~~, claim 2, wherein:

the numeral or symbol of each digit of the wafer-identifying information varies in accordance with a certain rule in response to change of one selected wafer to another, and

in the step of exposing the resist layer, one selected mask is changed to another in response to the change of one selected wafer to another in such a manner as to correspond to the rule of the variation of the numeral or symbol of each digit of the wafer-identifying information.

5. (Currently Amended) The method for imprinting wafer-identifying information according to ~~claim 1~~, claim 2, wherein:

in the step of exposing the resist layer, a positional relationship between the mask and the wafer is changed for each digit of the wafer-identifying information, so that the numeral or symbol of each digit of the wafer-identifying information is imprinted at a mutually different position.

6. (Currently Amended) The method for imprinting wafer-identifying information according to ~~claim 1~~, claim 2, further comprising the step of etching a layer underlying the patterned resist layer, using the patterned resist layer as an etching mask.

7. (Currently Amended) The method for imprinting wafer-identifying information according to ~~claim 1~~, claim 2, further comprising the step of forming a plating layer by performing plating with the patterned resist layer used as a frame.

8. (Canceled)

9. (Currently Amended) ~~The~~ An exposure method for imprinting wafer-identifying information ~~according to claim 8, wherein~~ that is used for imprinting wafer-identifying information using a patterned resist layer on wafers each having a plurality of thin-film devices formed thereon in a batch, the wafer-identifying information including a plurality of digits, each digit being expressed with a numeral or a symbol, the exposure method exposing the patterned resist layer formed on the wafer to light for forming a latent image of the wafer-identifying information, and comprising the steps of:

selecting a wafer to be imprinted with the wafer-identifying information, and

exposing the resist layer of the selected wafer, using a mask, to the light for forming the latent image of the wafer-identifying information, wherein:

in the step of exposing the resist layer, exposure is performed for each digit of the wafer-identifying information in which the numeral or the symbol is changeable wafer by wafer, by selecting a mask on which a pattern of a numeral or the symbol to be imprinted is drawn thereon for each digit; and

in the step of exposing the resist layer, the selection of a mask on which the pattern of a numeral or the symbol to be imprinted is drawn thereon and the exposure using the selected mask are repeated as many times as the number of digits of the wafer-identifying information, so that exposure is performed for all digits of the wafer-identifying information.

10. (Currently Amended) The exposure method for imprinting wafer-identifying information according to ~~claim 8,~~ claim 9, wherein:

in the step of exposing the resist layer, the resist layer is further exposed to light for forming a latent image of device location information for identifying a position of a thin-film device in the wafer, using a mask on which a pattern of the device location information is drawn thereon.

11. (Currently Amended) The exposure method for imprinting wafer-identifying information according to ~~claim 8~~, claim 9, wherein:

the numeral or symbol of each digit of the wafer-identifying information varies in accordance with a certain rule in response to change of one selected wafer to another, and

in the step of exposing the resist layer, one selected mask is changed to another in response to the change of one selected wafer to another in such a manner as to correspond to the rule of the variation of the numeral or symbol of each digit of the wafer-identifying information.

12. (Currently Amended) The exposure method for imprinting wafer-identifying information according to ~~claim 8~~, claim 9, wherein:

in the step of exposing the resist layer, a positional relationship between the mask and the wafer is changed for each digit of the wafer-identifying information, so that the numeral or symbol of each digit of the wafer-identifying information is imprinted at a mutually different position.

13. (Original) An exposure apparatus for imprinting wafer-identifying information that is used for imprinting wafer-identifying information using a patterned resist layer on wafers each having a plurality of thin-film devices formed thereon in a batch, the wafer-identifying information including a plurality of digits, each digit being expressed with a numeral or a symbol, the exposure apparatus exposing the patterned resist layer formed on the wafer to light for forming a latent image of the wafer-identifying information, and comprising:

a wafer selecting device for selecting a wafer to be imprinted with the wafer-identifying information, and

an exposure device for exposing the resist layer of the wafer selected by the wafer selecting device, using a mask, to the light for forming the latent image of the wafer-identifying information, wherein:

the exposure device has a mask selecting device for selecting a mask on which a pattern of a numeral or symbol to be imprinted is drawn thereon for each digit of the wafer-identifying information in which the numeral or the symbol is changeable wafer by wafer.

14. (Original) The exposure apparatus for imprinting wafer-identifying information according to claim 13, wherein the exposure device repeats the selection of a mask on which the pattern of a numeral or the symbol to be imprinted is drawn thereon and the exposure using the selected mask as many times as the number of digits of the wafer-identifying information, so as to perform exposure for all digits of the wafer-identifying information.

15. (Original) The exposure apparatus for imprinting wafer-identifying information according to claim 13, wherein the exposure device further exposes the resist layer to light for forming a latent image of device location information for identifying a position of a thin-film device in the wafer, using a mask on which a pattern of the device location information is drawn thereon.

16. (Original) The exposure apparatus for imprinting wafer-identifying information according to claim 13, wherein:

the numeral or symbol of each digit of the wafer-identifying information varies in accordance with a certain rule in response to change of one selected wafer to another, and

the mask selecting device changes one selected mask to another in response to the change of one selected wafer to another in such a manner as to correspond to the rule of the variation of the numeral or symbol of each digit of the wafer-identifying information.

17. (Original) The exposure apparatus for imprinting wafer-identifying information according to claim 13, wherein the exposure device further has a position changing device for changing a positional relationship between the mask and the wafer for each digit of the wafer-identifying information, so that the numeral or symbol of each digit of the wafer-identifying information is imprinted at a mutually different position.